

Appl. No. 10/646,649
Reply to Office action of August 8, 2005

AMENDMENT

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim Listing

1. (currently amended) A payload monitoring system for a vehicle having a chassis, comprising:
 - a first adjustable spring device;
 - a first pressure transducer that generates a first pressure signal based on a pressure of said first adjustable spring device;
 - a first sensor configured to generate a first position signal responsive to a relative height of the chassis with respect to a reference surface;
 - a first compressor configured to adjust said first adjustable spring device in response to an activation signal;
 - a display; and
 - a controller communicatively coupled to said first sensor, said first compressor, and said display, wherein said controller is configured to: determine a payload of said vehicle based on said first pressure signal and said first position signal; provide said activation signal to said first compressor based on said payload and said first position signal in order to substantially level said chassis; present said payload to an operator via said display; and present an overload warning to said operator via said display in the event that said payload is greater than a predetermined threshold.
2. (previously amended) The payload monitoring system of claim 1 wherein said first adjustable spring device is adjusted pneumatically.
3. (cancelled).
4. (previously amended) The payload monitoring system of claim 1 wherein said first adjustable spring device is adjusted hydraulically.
5. (cancelled).

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6. (previously amended) The payload monitoring system of claim 1 further comprising:
a second adjustable spring device; and
a second pressure transducer that generates a second pressure signal based on a pressure of said second adjustable spring device, wherein said controller determines a payload of said vehicle based on said first and second pressure signals.

7. (previously amended) The payload monitoring system of claim 6 wherein said first and second adjustable spring devices are adjusted pneumatically.

8. (currently amended) The payload monitoring system of claim 7 further comprising:
a second sensor generating a second position signal; and
a compressor that adjusts said first and second adjustable spring devices based on said second position signal.

9. (previously amended) The payload monitoring system of claim 6 wherein said first and second adjustable spring devices are adjusted hydraulically.

10. (currently amended) The payload monitoring system of claim 9 further comprising:
a second sensor generating a second position signal; and
a hydraulic pump that adjusts said first and second adjustable spring devices based on said second position signal.

11. (cancelled).

12. (cancelled).

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13. (previously amended) A method of monitoring a payload of a vehicle, comprising:
detecting a payload change within said vehicle, wherein said step of detecting includes detecting a change in vehicle position;
adjusting a spring device to compensate for said payload change, wherein said step of adjusting is based in part on said change in vehicle position;
generating a pressure signal based on a pressure of said spring device; and
calculating a payload value based on said pressure signal and said change in vehicle position;
informing an operator of said payload value
comparing said payload value to a threshold value; and
warning an operator if said payload value is greater than said threshold value.

14. (cancelled).

15. (cancelled).

16. (original) The method of claim 13 wherein said step of detecting a payload change includes detecting a change in vehicle position.

17. (original) The method of claim 13 further comprising:
initiating a delay period if a payload change is detected; and
confirming said payload change upon expiration of said delay period.

18. (original) The method of claim 13 wherein said step of adjusting a spring device includes adjusting hydraulic pressure supplied to said spring device.

19. (original) The method of claim 13 wherein said step of adjusting a spring device includes adjusting pneumatic pressure supplied to said spring device.

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20. The method of claim 13 wherein a pressure sensor generates said pressure signal.

21. (cancelled).

22. (original) The method of claim 13 further comprising:
generating a position signal of said vehicle; and
refining said payload value based on said position signal.

23. (cancelled).

24. (cancelled).

25. (cancelled).

26. (cancelled).

27. (cancelled).

28. (cancelled).

29. (cancelled).

30. (cancelled).